

AMENDMENT TO THE CLAIMS

1.(Currently Amended) A burn-in oven having a heat control system comprising an oven chamber, at least one burn-in board supporting a plurality of devices under test, each device under test being supported in a support having a heat exchanger portion, a plurality of separate controllable fans, each fan for providing a flow of air through an opening in a wall forming a duct in the oven chamber onto an associated heat exchanger portion of a support supporting a device under test, and into a space adjacent the supports above the burn-in board carrying the and the devices under test; and open to the respective fan, and a source of cooling air open to the duct in the oven chamber, and an exhaust for the cooling air from the oven chamber whereby a flow of cooling air is passed through the ductspace open to each of the separate fans and through the associated opening in the wall forming the duct to the exhaust from the burn-in oven chamber.

2.(Previously Presented) The burn-in oven of claim 1, including a damper movable to adjust a size of a damper opening for the airflow, and a controller for controlling the opening of the damper in response to a selected parameter.

3.(Previously Presented) A heat control system for devices in a burn-in oven comprising an oven chamber, at least one burn-in board supporting a plurality of devices under test, a separate socket carrying each device under test, a separate fan overlying each socket and device under test, each fan being separately controllable for providing a flow of air from an air source in the burn-in oven onto its associated device under test, a heater on each socket to heat the associated device under test, a temperature sensor associated with each socket to provide a temperature signal indicating the temperature of the associated device under test, and a controller for controlling the fan and the heater for each such device under test to maintain temperature at each device under test at a selected level.

4.(Previously Presented) The burn-in oven of claim 3, wherein said separate fans each have a fan housing, a separate electric motor driving each fan , and the housings each having an inlet for permitting air to be driven by the fan through a fan outlet onto an associated device under test.

5.(Cancelled)

6.(Previously Presented) The burn-in oven of claim 1, wherein said source of cooling air comprises a plenum chamber at the one end of said oven chamber, a second fan providing an airflow to the plenum chamber, and the second fan receiving a return airflow from the oven chamber.

7.(Previously Presented) The burn-in oven of claim 1, wherein there are a plurality of oven chambers, and each of the chambers has at least one burn-in board supporting a plurality of devices under test, comprising a separate fan board spaced from each burn-in board to form the space, a separate fan outlet opening through the fan board overlying each device under test on an associated burn-in board.

8.(Cancelled)

9.(Previously Presented) The burn-in oven of claim 1, wherein said oven chamber has a heat exchanger for cooling air passing therethrough, said cooling air passing through the heat exchanger before entering the space.

10.(Currently Amended) The burn-in oven of claim 1, wherein there are a series of vertically stacked burn-in boards in the oven chamber, each with an associated wall forming a duct, the walls forming ducts comprising fan boards, one fan board spaced from each the burn-in board on a side of the associated burn-in boards toward the devices under test, each fan being supported on a fan board for directing cooling air through an opening in the respective fan board onto a device

under test, and wherein each burn-in board forms one of thea ducts in combination with an underlying fan board that is associated with a burn-in board on an opposite side of the fan board from the respective duct, the cooling air in the respective duct cooling the surface of the burn-in board forming a wall of that duct~~facing the underlying the fan board.~~

11.(Original) The burn-in oven of claim 10, wherein there are a series of oven chambers side-by-side, and a heat exchanger between each of the adjacent oven chambers, the airflow from one oven chamber passing to one other oven chamber and through the heat exchanger between the one chamber and the other chamber.

12.(Currently Amended) In combination, a burn-in oven, and a plurality of first trays in the burn-in oven, combined with a cooling airflow source, the burn-in oven defining a compartment, the plurality of first trays forming burn-in boards having devices under test mounted thereon in a preselected array; a plurality of fan supports spaced from each of the burn-in boards~~trays~~ on a side of each burn-in board~~tray~~ so that the fan supports overlie the devices under test on the associated burn-in board, a laterally extending space being formed above each of the burn-in boards~~first trays~~, and comprising an airflow duct, the airflow ducts extending laterally to provide airflow to fans on thea~~eross a surface of each~~ fan supports associated with one respective burn-in board, a controllable fan mounted on each fan support and having a fan outlet opening substantially directly overlying each underlying device under test on an associated burn-in board tray, a source of cooling fluid flow on one lateral side of the airflow ducts, a controlled size inlet opening from the cooling airflow source to the ducts, and a controller for selectively controlling the operation of each fan as a function of a temperature signal provided from theeach of the devices under test underlying the respective fan.

13.(Currently Amended) The combination of claim 12, wherein the fan supports comprise fan trays spaced from each burn-in-board to form the space, and at least one adjustable damper for adjustably opening each respective space between the burn-in board~~trays~~ and an associated fan

tray, the controller adjusting the position of the damper to provide a substantially constant bleed airflow through the associated space.

14.(Original) The combination of claim 13, wherein said devices under test comprise sockets supporting an integrated circuit under test, a finned heat exchanger on the socket, said finned heat exchanger extending into the space between each burn-in board tray and its associated overlying fan tray.

15.(Previously Presented) The combination of claim 13, including a heat exchanger for cooling airflow entering the ducts on one end of the burn-in oven.

16.(Currently Amended) The combination of claim 12, wherein said burn-in oven has a blower for providing the flow of cooling air to an inlet ends of said ducts, and a flow passageway carrying air from said blower to the inlet ends to provide cooling air to each of the ducts.

17.(Original) The combination of claim 14 and individual heaters for heating each of the devices under test, said controller receiving a temperature signal from the respective device under test, and controlling its associated fan and heater to maintain the temperature sensed at a desired range.

18.(Previously Presented) An apparatus for cooling a device under test in a burn-in oven having a source of air, a support adapted to mount on a burn-in-board and supporting an integrated circuit comprising a device under test, a heat exchanger on the support, said heat exchanger extending into an airflow space, a temperature sensor for sensing the temperature of the device under test, a fan supported relative to the device under test to direct airflow onto the support, the fan being controllable to regulate such airflow onto the support as a function of the temperature sensed by the temperature sensor.

19.(Previously Presented) The apparatus of claim 18, wherein said support comprises a socket for the integrated circuit, and the heat exchanger is a finned heat exchanger.

20.(Previously Presented) The apparatus of claim 18, wherein said temperature sensor is mounted on the support and has a sensing element adjacent to the integrated circuit on the support.

21.(Previously Presented) A method of regulating the temperature of a device under test that is supported on a support having a heat exchanger in heat conducting relationship to the device under test, a heater for providing heat to the device under test, and a temperature sensor for providing a temperature signal indicating the temperature of the device under test, the method comprising the steps of providing a source of cooling airflow, providing a fan mounted to direct cooling airflow to the device under test, and controlling the fan to direct cooling airflow to the device under test as a function of the temperature sensed to maintain the sensed temperature within a selected range.

22.(Previously Presented) The method of claim 21 including the step of controlling a heater on the support in response to the temperature signal in connection with the fan to maintain the sensed temperature within the selected range.

23.(Previously Presented) The method of claim 22, wherein the support is mounted in a burn-in oven, and further comprising directing cooling air onto the heat exchanger when the temperature sensed is higher than the selected range.

24.(New) The burn-in oven of claim 1, and a separate heater mounted to provide heat to each device under test, a separate temperature sensor for sensing the temperature for each device under test, and a controller to control the heater and the associated fan in response to the temperature sensed at the respective device under test.